AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for the linearisation of a wide frequency band power amplifier, said method comprising the steps of:

estimating the instantaneous frequency of each sample of a plurality of samples of an input signal applied to said amplifier, ~~and~~

applying predistortions to the input signal, said predistortions having values depending, for each sample, on the estimated frequency of the input ~~signal.~~signal, and

dividing the wide frequency band into a limited number of frequency subbands, and providing a corresponding predistortion for each subband.

2. (previously presented): A method according to claim 1, wherein the frequency dependent predistortions are provided by a set of look-up tables, the number of look-up tables being equal to the number of frequencies, a look-up table containing, for each amplitude of the input signal, two correction values representing the amplitude and the phase of a predistortion.

3. (currently amended): ~~A method according to claim 1,~~ A method for the linearisation of a wide frequency band power amplifier, said method comprising the steps of:

estimating the instantaneous frequency of each sample of a plurality of samples of an input signal applied to said amplifier, and

applying predistortions to the input signal, said predistortions having values depending, for each sample, on the estimated frequency of the input signal,

wherein said predistortion values are calculated by using coefficients of a polynom of which the variable is the amplitude of the input signal.

4. (currently amended): ~~A method according to claim 1,~~ A method for the linearisation of a wide frequency band power amplifier, said method comprising the steps of:

estimating the instantaneous frequency of each sample of a plurality of samples of an input signal applied to said amplifier, and

applying predistortions to the input signal, said predistortions having values depending, for each sample, on the estimated frequency of the input signal,

wherein the instantaneous frequency of the sampled input signal is calculated by the derivative of the phase of the sampled input signal.

5. (original): A method according to claim 4, wherein the instantaneous frequency of the sampled input signal is calculated by the subtraction of the phases of two successive samples.

6. (currently amended): ~~A method according to claim 1,~~ A method for the linearisation of a wide frequency band power amplifier, said method comprising the steps of:

estimating the instantaneous frequency of each sample of a plurality of samples of an input signal applied to said amplifier, and

applying predistortions to the input signal, said predistortions having values depending, for each sample, on the estimated frequency of the input signal,

wherein the samples are represented by their rectangular coordinates in a complex plane, and

wherein the rectangular coordinates are converted into polar coordinates, the phase of a sample being used to estimate the instantaneous frequency, and the amplitude of the sample being used to determine the predistortion values for said frequency .

7. (currently amended): ~~A method according to claim 1,~~ A method for the linearisation of a wide frequency band power amplifier, said method comprising the steps of:

estimating the instantaneous frequency of each sample of a plurality of samples of an input signal applied to said amplifier, and

applying predistortions to the input signal, said predistortions having values depending, for each sample, on the estimated frequency of the input signal,

wherein the accuracy of estimation of the instantaneous frequency is lower than the accuracy of the amplitude of the input signal.

8. (original): A method according to claim 1, wherein the predistortion values or coefficients are periodically updated by measuring the effect of input test or regular signals on the output signal of the amplifier and by calculating the predistortion values or coefficients based on this measurement.

9. (previously presented): The method according to claim 1, wherein said method is used to linearize the power amplifier of a transmitter.

10. (previously presented): A transmitter including a power amplifier linearised by means of the method according to claim 1.

11. (previously presented): The transmitter according to claim 10, wherein said transmitter comprises a coherent receiver which is used for the updating of predistortion values or coefficients.

12. (previously presented): The method according to claim 8, wherein said method is applied to a station comprising a transmitter with a power amplifier to be linearised and a receiver, wherein the receiver is used for measuring the output of the power amplifier for updating predistortion values or coefficients.

13. (canceled).

14. (previously presented): The transmitter according to claim 10, transmitting CDMA signals.

15. (previously presented): A base transceiver station, including the transmitter according to claim 10.